

LIST OF CONTENTS

NUMBER 1

| | | |
|-----------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------|
| H. S. Rajagopalan and R. V. Grandhi | 1 | Reliability based structural analysis and optimization in X window environment |
| S. Dimova | 11 | Comparison and experimental verification of two techniques for friction force representation |
| J. Petrolito and K. A. Legge | 21 | Unified nonlinear elastic frame analysis |
| H. P. Lee | 31 | Effects of damping on the dynamic stability of a rod with an intermediate spring support subjected to follower forces |
| R. E. Diaz-Contreras and S. Nomura | 41 | Green's function applied to solution of Mindlin plates |
| K. J. Kang, C. W. Bert and A. G. Striz | 49 | Vibration and buckling analysis of circular arches using DQM |
| S. Ammar, G. Dhett and M. Fafard | 59 | Exact stability model of space frames |
| E. A. Sadek | 73 | Minimum weight design of structures under frequency and frequency response constraints |
| K. Chandrashekhara and S. Joseph Antony | 79 | Interaction analysis of strip footing resting on a non-homogeneous elastic medium |
| T. Iwakuma, K. Ikeda and F. Nishino | 87 | Consistency of straight-beam approximation of a thin-walled circular beam |
| Chorng-Fuh Liu and Chih-Hsing Huang | 95 | Free vibration of composite laminated plates subjected to temperature changes |
| L. J. Lee and Y. J. Fan | 103 | Bending and vibration analysis of composite sandwich plates |
| T-P. Chang and J-L. Ke | 113 | Nonlinear dynamic response of a nonuniform orthotropic circular plate under random excitation |
| V. Balamurugan, M. Ganapathi and T. K. Varadan | 125 | Nonlinear dynamic instability of laminated composite plates using finite element method |
| Y. V. L. N. Murthy, G. Venkata Rao and P. Krishna Iyer | 131 | Numerical simulation of welding and quenching processes using transient thermal and thermo-elastoplastic formulations |

| | | |
|----------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------|
| Wen-jun He, Hao-jiang Ding and Hai-chang Hu | 155 | Degenerate scales and boundary element analysis of two dimensional potential and elasticity problems |
| P. A. Bosela and D. R. Ludwiczak | 159 | A new pre-loaded membrane geometric stiffness matrix with full rigid body capabilities |
| <i>Technical Note</i> | | |
| S. H. Tan, L. K. Seah and S. C. Fok | 169 | Connections in cold-formed thin-walled structures |
| NUMBER 2 | | |
| F. F. Barsoum and W. F. Carroll | 173 | Evaluating the serviceability of the cracked reinforced concrete Space Shuttle crawlerway tunnel |
| Chongbin Zhao and G. P. Steven | 181 | <i>A-posteriori</i> error estimators/correctors for natural frequencies of membrane vibration problems |
| Chang-New Chen | 189 | A finite element study on bifurcation and limit point buckling of elastic-plastic arches |
| M. A. De Rosa and N. M. Auciello | 197 | Free vibrations of tapered beams with flexible ends |
| Ahmed K. Noor and Yong H. Kim | 203 | Buckling and postbuckling of composite panels with cutouts subjected to combined edge shear and temperature change |
| Ahmed K. Noor and Jeanne M. Peters | 223 | Reduction technique for tire contact problems |
| Yueng-Hwa Lu | 235 | A study of the finite element stabilized matrix to the hemispherical cup-drawing process |
| Pao-Hsui Wang and Chiung-Guei Yang | 243 | Parametric studies on cable-stayed bridges |
| R. S. Jangid | 261 | Seismic response of an asymmetric base isolated structure |
| Sang-Baek Ju and Hyo-Chol Sin | 269 | New incompatible four-noded axisymmetric elements with assumed strains |
| M. Pourazady and Z. Fu | 279 | An integrated approach to structural shape optimization |
| Cheng-Hsing Hsu, Kuang-Yuan Kung and Jong-Jhy Jou | 291 | Runge-Kutta method for a two layer system to shoot from two constraint sets to the same target set |
| Sun Bingnan, Tang Jinchun and Xiang Yuyin | 297 | A new off-boundary element method for analyzing plate and shallow shell bending |
| D. N. Venkatesh and U. Shrinivasa | 305 | Hexahedral elements using PN functions—applications to beams |

| | | |
|-------------------------------------------------|-----|------------------------------------------------------|
| S. Maleki | 315 | Higher order (HO3) plane-stress finite strip program |
| S. Maleki | 329 | Higher order (HO2) plane-stress finite strip program |
| <i>Technical Note</i> | | |
| Zhao MeiYing, Yang Ling and Wan XiaoPeng | 337 | Load distribution in composite multifastener joints |

NUMBER 3

| | | |
|---------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------|
| Shu Xiao-ping | 343 | An improved simple higher-order theory for laminated composite shells |
| D. Val, F. Bljoger and D. Yankelevsky | 351 | Optimization problem solution in reliability analysis of reinforced concrete structures |
| A. E. Anuta Jr | 357 | The modal equations and equal frequencies in definite systems |
| O. F. Hughes and M. Ma | 369 | Elastic tripping analysis of asymmetrical stiffeners |
| A. J. Deeks | 391 | Automatic computation of plastic collapse loads for frames |
| N. Bouhaddi and R. Fillod | 403 | Substructuring by a two level dynamic condensation method |
| G. Burgess and E. Mahajerin | 411 | Accurate body force integration in boundary methods applied to plane elasticity |
| N. I. Ioakimidis | 415 | Inequality constraints in rectangular finite/boundary elements |
| G. Jayarama Rao, P. Rathinam and R. Narayanan | 433 | Development of hybrid method coupling moire interferometry and finite element analysis |
| K. S. Surana and G. Y. Gan | 441 | Role of p -version $Q(p)$ and $Q'(p)$ two-dimensional approximation functions in smooth and singular problems |
| A. Umar, H. Abbas, A. Qadeer and D. K. Sehgal | 471 | Prediction of error in finite element results |
| G. Singh, B. Bhushan and G. Venkateswara Rao | 481 | Post-buckling of moderately thick elliptical plates |
| I. A. Jones | 487 | A curved laminated orthotropic axisymmetric element based upon Flügge thin shell theory |
| Chen Chang-qing, Wang Xiao-ming and Shen Ya-peng | 505 | Finite element approach of vibration control using self-sensing piezoelectric actuators |

NUMBER 4

| | | |
|--------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------|
| Yeong-Bin Yang, Shyh-Rong Kuo and Ming-Te Liang | 513 | A simplified procedure for formulation of soil-structure interaction problems |
| N. B. Edgar and K. S. Surana | 521 | On the conditioning number and the selection criteria for p -version approximation functions |
| L. M. C. Simões | 531 | Optimization of frames with semi-rigid connections |
| U. A. Morsy and T. G. Brown | 541 | Three-dimensional non-linear finite element model for the Molikpaq, Gulf's mobile caisson |
| S. Dumont and F. Lebon | 561 | Representation of plane elastostatics operators in Daubechies wavelets |
| A. Ch. Yiannopoulos | 571 | A simplified solution for stresses in thick-wall cylinders for various loading conditions |
| Y. Suzuki, E. S. Miyata and S. C. Iverson | 579 | Static analyses of the triangular running skyline system: a three-dimensionally movable logging cable system |
| Seung-Kil Paek and In Lee | 593 | Flutter analysis for control surface of launch vehicle with dynamic stiffness |
| P. Léger, P. Côté and R. Tinawi | 601 | Finite element analysis of concrete swelling due to alkali-aggregate reactions in dams |
| M. Sathyamoorthy | 613 | Influence of transverse shear and rotatory inertia on nonlinear vibrations of circular plates |
| Kaisheng Chen, Shengkun Zhang and Wei Huang | 619 | Artificial intelligence β -unzipping method in structural system reliability analysis |
| E. C. Zacharenakis | 627 | On the input-output decoupling with simultaneous disturbance attenuation and H^∞ optimization problem in structural analysis |
| D. N. Venkatesh and U. Shrinivasa | 635 | Plate bending with hexahedral PN elements |
| A. Y. Aköz and F. Kadioğlu | 643 | The mixed finite element solution of circular beam on elastic foundation |
| W. Glabisz | 653 | Stability of simple discrete systems under non-conservative loading with dynamic follower parameter |
| K. S. Venkatesha, T. S. Ramamurthy and B. Dattaguru | 665 | Generalized modified crack closure integral (GMCCI) and its application to interface crack problems |
| | | <i>Technical Note</i> |
| L. S. Ramachandra and H.-R. Meyer-Piening | 677 | Transient response of sandwich plates in contact with water |

NUMBER 5

| | | |
|----------------------------------------------------|-----|---------------------------------------------------------------------------------------------------|
| Y. S. Shin and D. T. Hooker | 683 | Damage response of submerged imperfect cylindrical structures to underwater explosion |
| Yu Tang | 695 | Active control of SDF systems using artificial neural networks |
| K. Abhary | 705 | Maximum stress in round structural members under general case of static loading |
| R. Butler and J. R. Banerjee | 715 | Optimum design of bending-torsion coupled beams with frequency or aeroelastic constraints |
| Shilin Chen, M. G radin and E. Lamine | 725 | An improved dynamic stiffness method and modal analysis for beam-like structures |
| G. Bolzon | 733 | Hybrid finite element approach to quasi-brittle fracture |
| Dong Won Kim and Byung Man Kwak | 743 | Reliability-based shape optimization of two-dimensional elastic problems using BEM |
| X. Li, M. P. Romo O. and J. Avil s L. | 751 | Finite element analysis of dam-reservoir systems using an exact far-boundary condition |
| M. Zhou and G. I. N. Rozvany | 763 | An improved approximation technique for the DCOC method of sizing optimization |
| Deok-Kee Choi | 771 | Application of numerical Green's functions in the design of plates using symbolic computation |
| X. N. Wang and X. C. Wang | 781 | Finite element analysis on creep damage |
| Zhang Xianmin, Liu Hongzhao and Shen Yunwen | 787 | Finite dynamic element analysis for high-speed flexible linkage mechanisms |
| C. P. Chaplin and A. N. Palazotto | 797 | The collapse of composite cylindrical panels with various thickness using finite element analysis |
| K. Ray and R. C. Kar | 817 | Parametric instability of a symmetric sandwich beam with higher order effects |
| A. I. Karabinis and P. D. Kiousis | 825 | Plasticity computations for the design of the ductility of circular concrete columns |
| J. Heitzer | 837 | Dynamic interaction of a plate and an impactor |
| | | <i>Technical Note</i> |
| A. A. Khan, M. Al-A'ali and N. Al-Shamlan | 849 | Simplification of context-free grammar through Petri net |

NUMBER 6

| | | |
|---------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------|
| A. K. Noor and J. M. Peters | 853 | Nonlinear and postbuckling analyses of curved composite panels subjected to combined temperature change and edge shear |
| L. B. Eldred, W. P. Baker and A. N. Palazotto | 875 | Numerical application of fractional derivative model constitutive relations for viscoelastic materials |
| J. Petrolito | 883 | Triangular thick plate elements based on a hybrid-Trefftz approach |
| S. A. Tavares | 895 | Thin conical shells with constant thickness and under axisymmetric load |
| Chang-Koon Choi and Heung-Jin Chung | 923 | Error estimates and adaptive time stepping for various direct time integration methods |
| B. Palazzo and L. Petti | 945 | Reduction factors for base isolated structures |
| A. C. Aparicio, J. R. Casas and G. Ramos | 957 | Computer aided design of prestressed concrete highway bridges |
| D. Thambiratnam and Y. Zhuge | 971 | Free vibration analysis of beams on elastic foundation |
| Tso-Liang Teng, Cho-Chung Liang and Ching-Cho Liao | 981 | Optimal design of a dynamic absorber using polymer-laminated steel sheets |
| E. Nikolaidis and M. Zhu | 989 | Design of automotive joints: using neural networks and optimization to translate performance requirements to physical design parameters |
| Dj. Boussaa, K. Dang Van, P. Labbé and H. T. Tang | 1003 | Finite pure bending of curved pipes |
| C. T. F. Ross, P. Haynes and W. D. Richards | 1013 | Vibration of ring-stiffened circular cylinders under external water pressure |
| Ton-Lo Wang, Dongzhou Huang, Mohsen Shahawy and Kaizan Huang | 1021 | Dynamic response of highway girder bridges |
| Wen-jun He, Hao-jiang Ding and Hai-chang Hu | 1029 | Non-equivalence of the conventional boundary integral formulation and its elimination for two-dimensional mixed potential problems |
| N. Siva Prasad and T. K. Sankaranarayanan | 1037 | Estimation of residual stresses in weldments using adaptive grids |
| M. Köhl, G. Dhondt and J. Broede | 1047 | Axisymmetric substitute structures for circular disks with noncentral holes |

- K. Satish Kumar,**
B. Dattaguru,
T. S. Ramamurthy and
K. N. Raju 1067 Elasto-plastic contact stress analysis of joints subjected to cyclic loading

- M. Ziyaeifar and A. E. Elwi** 1079 Degenerated plate-shell elements with refined transverse shear strains

- D. Hitchings, P. Robinson** 1093 A finite element model for delamination propagation and **F. Javidrad** in composites

Technical Note

- K. Kanaka Raju,**
N. Rajasekhara Naidu
and G. Venkateswara Rao 1105 Thermal buckling of circular plates with localized axisymmetric damages

- i List of Contents and Author Index for Volume 60, 1996